Social Media as a Tool in Medicine

Social Media and Clinical Care
Ethical, Professional, and Social Implications

Katherine C. Chretien, MD; Terry Kind, MD, MPH

It is an exciting time to practice medicine during our digital "coming of age." Social media, the freely available Web-based platforms that facilitate information sharing of user-generated content, such as social networking sites, media-sharing sites, blogs, microblogs, and wikis, have transformed the way we communicate as a society. Through community building, message amplification, rapid dissemination, and engagement, social media has changed our interactions with others and, by direct consequence, our relationships. For health care, this represents a veritable social revolution.

Indeed, medicine is constantly evolving to adapt to new technologies. These advances have led to new therapies, diagnostic tools, and ways of communicating. As physicians and lifelong learners, it has been imperative to embrace the new when it has meant better and more efficient patient care while holding on to the stable tenets of medicine that root our profession: humanism, integrity, ethics, professionalism, and trust.

Patients have been active on social media to find health information, find support through discussion groups and forums, and chronicle their illness journeys. Naturally, they are also interested in using social media to facilitate communication between themselves and their providers. In a survey of patients of an outpatient family practice clinic, 56% wanted their providers to use social media for appointment setting and reminders, diagnostic test results reporting, health information sharing, prescription notifications, and answering general questions. For those patients who do not use social media, many would start if they knew that they could connect with their providers there.

Physicians are also exploring ways to use social media, both personally and professionally, although personal use is more common. Some physicians use social media professionally to find and share health information, communicate/network with colleagues and trainees, disseminate their research, market their practice, or engage in health advocacy. In addition, a growing minority use social media to directly interact with patients or in other ways that augment clinical care.

In this article, we review ways that social media are being used for clinical care and the potential implications that this has on ethics, professionalism, and society. As with all innovations and technological leaps forward, it is time to be mindful and reflective of our professional commitments while discovering better ways to engage and care for our patients.

Social Media in Clinical Care
Peer-to-peer healthcare is emerging as a source for patient information and support. In a 2011 survey, 23% of US adult Internet users with chronic medical conditions (eg, hypertension, diabetes mellitus, or cancer) had gone online to find others with the same medical conditions compared with 15% of users without a chronic condition. Qualitative analysis of posts and discussion forum topics on the 10 largest diabetes management groups on Facebook revealed that patients, as well as family members and friends, share personal clinical information, receive emotional support, and request diabetes management guidance from other group members. Patients can tap into various "health subcultures" on the microblogging and social networking site Twitter, including weight-loss communities that can provide accountability, encouragement, and advice from health professionals. For those patients with rare diseases, peer-to-peer health care can result in meaningful online relationships and support in ways not possible before the advent of the Internet for both patients and their caregivers.

Some patients and/or family members use social media to raise money for their illness or for their personal healthcare costs. Other social networking online communities are built around data-sharing platforms, where patients share quantitative information about their medical conditions to learn from the aggregated data reports to improve their own outcomes. Here, patients share their conditions, symptoms, and treatment outcomes; track their own health; and connect with patients who share the same health conditions while contributing to the community data cache.

Members have reported benefits from participation including better informed treatment decisions, symptom management, higher quality of life, and perceived control over their condition; a minority use their data in their visits with their healthcare providers, although it is unclear in what ways and to what utility. This self-reported patient data have also led to new clinical research insights. For example, researchers using observational data housed on such a platform found that lithium therapy had no impact on amyotrophic lateral sclerosis disease progression, later confirmed by subsequent randomized trials.

Physicians can also use social networking to crowdsource answers to clinical questions. For example, on Sermo, an online physician-only social networking community, credentials are verified during registration of new members and "physicians from the Washington DC Veterans Affairs Medical Center (K.C.C.); George Washington University School of Medicine and Health Sciences (K.C.C., T.K.); and Children’s National Medical Center, Washington, DC (T.K.).

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Correspondence to Katherine C. Chretien, MD, 50 Irving St, NW, Medical Service (111), Washington, DC 20422. E-mail Katherine.Chretien@va.gov

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Social media, offering a public reservoir of information, may serve as a source of patient information to aid clinical care. One report in the literature describes how emergency physicians were able to contact the spouse of an amnesic patient using the popular social networking site Facebook when other traditional sources of information were exhausted. A study of pediatric faculty and trainees found that 14% to 18% of trainees (but no faculty) had conducted an Internet or social media Web site search for information about a patient; 14% of faculty stated they would conduct an Internet search for additional patient information if necessary.

Some physicians also make the deliberate decision to “friend,” or connect, on social networks with their patients to engage patients and seem more approachable. Others have done so with less certainty and have reflected on the complexity of the situation. In a survey of practicing physicians, approximately one third of physicians who use social networking reported receiving a friend request from a patient or a patient’s family member; however only a small minority (5%) had ever extended the friend request themselves.

Social media-savvy practices have set-up closed social media platforms that allow for patients to be actively involved in their own care coordination, to track their clinical progress, and for greater access to their physicians. These have been associated with concierge practices where patients pay an enrollment fee in exchange for availability of appointments when they need them or an instant message chat or cyber-visit with their physician using social media or they may be part of large integrated healthcare systems using Facebook-like profile pages for their doctors.

By transcending geographical boundaries, social media has facilitated extension of clinical care to distant patients. Telemedicine, broadly defined as using telecommunication for patient care, has been around since the 1960s but has only recently experienced rapid growth thanks to new technologies. Systematic reviews of telemedicine have found telemedicine to be feasible, well accepted by patients, and reliable. Data were lacking, however, to make many conclusions about its clinical effectiveness compared with face-to-face care or cost savings. Many, including insurance carriers, however, are hopeful that telemedicine may serve to reduce health disparities in rural areas. In a 2011 US survey of practicing physicians, 7% had used video chats to communicate with patients. International medical relief organizations working in remote areas have credited social networking for helping to coordinate complicated medical and logistical demands of their work, including gaining access to international specialists. As telemedicine has grown, so has the use of social media tools to create virtual clinics.

Finally, hospitals have long recognized the power of social media as a tool for marketing and engagement of their patient base. Physician practices are also using Facebook pages, Twitter accounts, and blogs in hopes to grow their practice and earn patient referrals. In addition, patients can now rate their physicians on any of a multitude of physician rating sites, enabling patients to enter reviews and ratings of their physicians, freely available for anyone to see. Most sites provide some basic information about the physician, such as years in practice and contact information, with some also including training. In a US study, 37% had consulted physician rating sites when gathering information about a specific provider.

Figure 1 depicts key interactions among patients, physicians, and the public. Solid line circles denote secure interactions. Dotted line circles denote personal networking interactions.

Ethical and Professional Implications

The American Medical Association (AMA) principles of medical ethics can serve as a framework to discuss ethical implications of physician use of social media for clinical care. Key elements of the principles that apply to social media in clinical care are listed below, followed by discussion of related social media issues. See Tables 1 through 3 for recommendations pertaining to ethical and professional conduct while using social media in several different contexts.

Uphold the Standards of Professionalism (AMA Principle II)

Medical professionalism has been defined in many ways but generally includes standards of competence and integrity, placing the patient’s interest above those of the physician, and providing expert advice to society on matters of health. It is the basis of trust given to physicians and to the profession.
the cornerstone of our therapeutic alliance. Inherent in these professional codes is a higher standard of behavior expected of physicians. Professionalism is now a standard part of US medical school curricula; student professionalism is evaluated by observation and, in a majority of medical schools, by formal testing in structured clinical examination settings.

Social media use by physicians for clinical and nonclinical purposes poses some dilemmas with regard to professionalism as physicians are traditionally taught. Online, the boundaries of our professional interactions are less clear (previously confined to the outpatient office or the hospital). Professionals, not limited to physicians, have had their professional character judged on the basis of the way they represent themselves online; to some extent, physicians will be viewed in their professional role whenever they are in public, including when using social media. With the blurring of personal and professional content online, there remains less certainty about what constitutes appropriate professional behaviors online, and these opinions differ between medical students and faculty and even among medical education faculty. For instance, a photograph posted on a personal social networking site of a physician appearing inebriated during off hours may be deemed inappropriate by some and not of concern to others. There may be generational differences, with older generations espousing more conservative views about what a medical professional should and should not post. Published social media guidelines by national medical organizations and medical school social media policies often lack specific behavioral guidance or definitions of professionalism as applied to the online space. Physicians active in social media have offered their own guiding principles for online professionalism, such as “be honest, forthright, helpful and compassionate” and “recognize that you represent your profession, and help others recognize that they do, too.” Some patients may view a physician’s online activity as a proxy for the common sense and trustworthiness required for patient care. Most physicians will want to clearly identify themselves to lend credibility and accountability to their online communications; those who choose to use social media anonymously should be mindful that anonymity can breed disinhibition, and true online anonymity may be difficult, if not impossible, to achieve.

Clearer are the opportunities that exist for physicians to promote medical professionalism using social media. Sharing credible health information and resources, using social media for health advocacy, and developing innovations that improve delivery of care using social media are all ways to harness its power for communication. See the section titled Make Relevant Information Available to Patients, Colleagues, and the Public (AMA Principle V) for further discussion.

Be Honest in All Professional Interactions (AMA Principle II)
Online misrepresentation of credentials was one of the most common online professionalism violations reported to state medical boards, with many resulting in serious disciplinary actions. In addition, conflicts of interest, including receiving financial compensation for the promotion of any product or paid advertisement on a blog or other Web site, should be disclosed. When researchers analyzed the content of blogs written by health professionals, 11% contained product endorsement of specific healthcare products; none provided conflict of interest disclosures. Some physician tweets also contain suspect product promotions. Of note, Federal Trade Commission regulations released in 2009 require material connections (sometimes payments or free products) between advertisers and endorsers to be disclosed. A blogger who receives cash or in-kind payment to review a product is considered an endorser. In addition, both advertisers and endorsers may be liable for false or unsubstantiated claims made in an endorsement.

Report Physicians Deficient in Character or Competence, or Engaging in Fraud of Deception, to Appropriate Entities (AMA Principle II)
The ethical duty of reporting the impaired, negligent, or otherwise unprofessional physician applies to the social media space when physicians see content posted by other physicians that may be harmful to patients or the public. This may include advertising false claims, misrepresentation of credentials, or posting grossly unprofessional content online. In their guidance on professionalism in the use of social media, the AMA advises physicians, “When physicians see content posted by colleagues that appears unprofessional, they should bring it to the attention of the individual or report it to the authorities.” We agree that it is part of a physician’s ethical duty to report harmful content (however one defines this), either by discussing with the individual directly or by informing the individual’s employer or state licensing board. Among violations of online professionalism reported to state medical boards, half were reported to the board by another physician.

Safeguard Patient Confidences and Privacy Within the Constraints of the Law (AMA Principle IV)
A major challenge of using social media is ensuring that digital communication is secure. Stemming from HIPAA enacted by Congress in 1996, the Department of Health and Human Services (HHS) issued the Privacy Rule, which provided the first-ever federal privacy standards to protect patient health information provided to doctors and other healthcare providers, hospitals, and health plans, so-called covered entities. The Privacy Rule, in effect since 2003, levies heavy fines and potential criminal charges on unauthorized disclosure of individually identifiable health information, also known as protected health information, by covered entities. Protected health information applies to health information in oral, paper, or electronic forms. There have been many well-publicized breaches of HIPAA involving social media; in many of these cases, disclosure was inadvertent. The HIPAA Privacy Rule includes a safeguards standard that requires covered entities to reasonably safeguard protected health information from unauthorized disclosure, both intentional and inadvertent, using physical, administrative, and technical safeguards. These standards are somewhat flexible and accommodate entities of different sizes and resources. For instance, e-mail communication between patient and provider using unencrypted e-mail could be permissible, provided there were some protections followed, such as limiting the amount...
and specificity of information transmitted this way. Individual states may have their own separate privacy laws; for instance, states vary on who may grant permission to release medical charts.50

Communicating Directly With Patients
When using social media for clinical care, great care must be made to ensure that protected health information is safeguarded. Patient privacy breaches can cause much greater harm when occurring online than when face-to-face given the potential wide reach of social media and the permanency of digital information.36 Patients who desire to communicate with their healthcare provider via social media should be made aware of the privacy protections put in place by their physician or physician’s practice and should provide consent to participate given these provisions (Table 1). Closed, secure systems with data encryption can maximize safeguards. Attention should always be paid to the security (vulnerabilities to external security threats), access, and permissions involved in any social media tool used for clinical care. On unsecure open sites, such as popular third-party sites Facebook and Twitter, postings, whether open to the public or private message, may ultimately belong to the third party,51 and security breaches have been known to occur.52

Writing About Patients on Social Media
Outside of communicating directly with patients, writing about specific patients on social media sites without their consent, such as writing a narrative about a patient on a blog or mentioning an interaction with a patient as a status update on Facebook or Twitter, requires additional ethical consideration. Stevenson and Peck53 propose the model of double-effect reasoning when deliberating ethical cases in social media. This model is based on the moral norms of doing good and avoiding evil and takes into account an agent’s intent and the foreseen and unforeseen effects of one action.54 On the basis of Cavanaugh’s original criteria,54 Stevenson and Peck53 offer modified criteria for evaluating social media actions (Figure 2).

Applying these criteria to the example of writing a respectful patient narrative on a blog, we start with the following question: is it ever ethical to write publicly about specific patients without their expressed consent? Clearly, if it is written in such a way that the patient could be identified by the patient or someone else, it violates the ethical principle of patient privacy (as well as being a HIPAA transgression). However, what are the ethical implications if the patient was properly deidentified? The answer to this question may be debated. When medical educators were asked to rate a list of specific online behaviors on appropriateness, the majority felt that it was rarely or never acceptable to write a deidentified patient narrative using a disrespectful tone (86-88%).5 Fewer, but still a majority, felt that writing this deidentified patient narrative using a respectful tone was never or rarely acceptable (61%).58 It is our view that writing a deidentified patient narrative using a respectful tone on a blog or other social media site, similar to narratives published in books and medical journals, is not itself wrong. Next, the intent is examined. If the intent of writing and sharing the narrative is to stimulate understanding or empathy without intent to harm the patient, the second criterion is fulfilled. Finally, if there is a reflection about the physician’s professional and ethical duties and due care is taken to limit any foreseen harm (patient deidentification, use of a respectful tone, and unlinking the narrative to a specific institution), then the action would seem to be ethically justifiable. However, publicly posting a status update about a specific patient to release frustrations or to entertain others with a humorous anecdote places a physician’s self-interest above the patient’s and may not be ethically justifiable despite a lack of identifying details, even if there was no intent to harm the patient.

Writing about individual patients and protecting their identity may be more difficult than physicians think. A study of 271 medical blogs written by health professionals found that individual patients were described in 42% of blogs. Of these, 17% included sufficient information for patients to identify their providers or themselves, and 3 included recognizable photographic patient images.43 Potential patient privacy violations have also been reported in medical student online postings45 and by self-identified physicians on Twitter.44 In most of these cases, there was no malicious intent to violate patient’s privacy. When possible, obtain a patient’s permission before writing about his or her online. Because both real and supposed (ie, a patient thinks that he or she is being written about or a reader thinks a narrative identifies a specific patient) privacy violation could be damaging to both physicians and patients, it is important to explicitly state that narrative accounts have been fictionalized or that consent from the patient or patient’s family had been obtained. Deidentification can be accomplished by omitting or changing key patient details, avoiding description of rare medical problems, and not including a specific time frame or location when and where the encounter occurred (Table 2).

Looking Up Information About Patients on the Internet
Use of the social media double-effect reasoning model53 can help in determining whether it is ethical to look up information about patients on the Internet for diagnostic or treatment purposes. The act in of itself is not wrong, because the search accesses public information. The intent is to help the patient. However, if aware, some patients could experience this as a boundary violation and compromise of trust.37 Limiting foreseen harms could mean asking the patient or other relevant party for consent to access information. If, however, the intent

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1. The act considered separately from its unintended harmful effect is in itself not wrong.
2. The agent intends only the good and does not intend harm as an end or as a means.
3. The agent reflects upon his/her relevant duties, considering accepted norms, and takes due care to eliminate or alleviate any foreseen harm through his/her act. (Consider: security of communication, patient consent, ability to identify patient, potential audience, professional reputation and responsibilities, tone.)

Figure 2. Ethical criteria to evaluate social media actions by healthcare providers. Adapted with permission from Stevenson and Peck.53

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was, even in part, voyeuristic, then the action would not be ethically justifiable.

In general, healthcare providers do not believe that it is an invasion of privacy to conduct an Internet or social media site search for people that they know or work with, and they believe that publicly accessible social media profiles are public information. However, significant variation exists in how providers would respond to accessed information. For example, when pediatric trainees and faculty were given a series of hypothetical vignettes involving concerning information (eg, suicidal ideation or reference to drug use) gleaned from a patient’s public social media site profile, respondents differed on how they would use that information, from immediately contacting the parents/guardians or law enforcement to using that information at the next clinical visit to doing nothing. So, while the initial action of looking up patient information may be ethically sound, there lacks consensus about how best to use this information in clinical care. It is also unclear how routine use of patient search information might impact the patient-physician relationship.

**Make Relevant Information Available to Patients, Colleagues, and the Public (AMA Principle V)**

**Sharing Credible Health Information and Patient Education**

By using blogs or social networking sites to share credible health information, social media can help physicians fulfill the professional obligation to share relevant information with patients, colleagues, and the public and help the public place the results of medical studies or other health-related current events in proper context. Some physicians assert that it is an ethical obligation for physicians to lend their voices to public discourse on healthcare topics online. Social media can allow individual physicians to reach many for the purposes of patient education. For example, through blogging and recording videos, physicians are instructing patients on everything from dosing liquid medication for infants and children to explaining rotator cuff injuries. Medical students across multiple continents have used social media to help their institutions adopt patient safety tools. Physicians and physicians-in-training who use their presence on social media to broadcast their professional commitments and values can become high-impact contributing members of the medical profession who can promote trust in the profession. They also combat the unscientific but amplified voices in the media who may spread misleading and sometimes dangerously inaccurate statements regarding health.66

**Physician Rating Sites**

In making relevant information available to patients, physician rating sites allow a greater amount of information to factor into an individual’s decision of which physician to choose for his or her care. Although the helpfulness of these ratings has not been proven, these sites could theoretically contribute to health literacy, engagement in patients’ own care, and ability to perform quality assessment. Many, however, question whether reviews provide constructive feedback; although most online physician reviews are positive, there are those reviews that appear disproportionately poor or even constitute possible acts of sabotage from competing providers. As quality of healthcare becomes more transparent to the public, there needs to be ongoing discussion on conduct of these sites to provide the most benefit to patients and their providers through constructive information exchange, while limiting physician harm from defamation or inaccurate reviews.

**Regard Responsibility to the Patient as Paramount (AMA Principle VIII)**

In the social media sphere, the concept of responsibility to the patient appears when thinking about social media relationships between physicians and patients and the related concept of patient exploitation.

**Trust and Social Media Relationships Between Physicians and Patients**

The patient-physician relationship is nurtured when physicians provide information, encourage autonomous decision-making, act respectfully and in a timely manner, preserve confidentiality, and facilitate access to care. Social media can help physicians accomplish some of these goals through facilitation of information sharing and improving accessibility to their providers, thereby building trust. Trust may be compromised if there are conflicting expectations of how clinical care using social media will be conducted.

**Establishing Patient-Physician Relationships Using Social Media**

Just as establishing a patient-physician relationship via email outside of a preexisting relationship may be medically and ethically objectionable because of questions about the integrity of the patient-physician relationship, trust, and the patient’s best medical interests, so comes into question establishing a relationship solely via social media. Use of social media to

### Table 2. Recommendations for Physicians Who Have Blogs or Practice Websites

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<tr>
<th>Context</th>
<th>Recommendations for Ethical and Professional Conduct</th>
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<tbody>
<tr>
<td>Writing about patients</td>
<td>Avoid writing about specific patients when possible or obtain patient permission and state explicitly</td>
</tr>
<tr>
<td></td>
<td>Protect identity of patients through deidentification or fictionalize encounters and state explicitly</td>
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<td></td>
<td>Use respectful tone</td>
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<td>Health-related content</td>
<td>Share credible health information and resources</td>
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<td></td>
<td>Counter inaccuracies in the media</td>
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<td></td>
<td>Place results of recent studies in context</td>
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<td></td>
<td>Use patient education videos</td>
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<tr>
<td>Endorsements and</td>
<td>Disclose any in-kind or financial compensation received</td>
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<tr>
<td>identifications</td>
<td>Beware of making false or misleading medical claims</td>
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<td>Identification</td>
<td>Avoid anonymity</td>
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<td>Accurately state credentials</td>
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<td>State whether you are or are not representing your employer or institution</td>
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provide specialized care in resource-poor areas, however, may be an exception, when no other options exist.

Online “Friendships” With Patients on Social Networking Sites
Preservation of professional boundaries online is important to the integrity of the patient-physician relationship, because online “friendships” may create a dual relationship, that is, having any relationship with a patient, whether it be social, financial, and so on, in addition to the therapeutic one, that may compromise medical care provided to the patient and/or introduce interactions extraneous to the relationship.66 Such friendships may also lead to problematic self-disclosures (by patients and/or by physicians) that could threaten the therapeutic relationship. Research suggests that physician self-disclosures in the clinical setting may not help patients and, in some cases, may be a disruptive influence.57 Meanwhile, in the online setting, particularly on sites that contain personal content, there is much more disclosure, intentional and/or inadvertent, at risk.

Given these risks, Guseh et al66 advise physicians to never extend a request to become a social networking friend with a patient. In cases where the invitation is extended by the patient, physicians are advised to avoid accepting the invitation and to have a face-to-face discussion of why it would be unethical if actively declining the invitation might be damaging to the therapeutic relationship. The view that physicians should not be online friends with patients is supported by the AMA and others.40,68 These guidelines are appropriate if the social networking site in question is used primarily for personal purposes, such as Facebook or an online dating site. However, in other cases, such as professional social networking sites where limited personal content is shared, physicians may be able to connect with patients and still maintain the professional nature of the relationship. Initiating a social networking connection with a patient on any type of site, however, can cause the patient to feel coerced or pressured to accept the request because of the inherent power differential within the relationship. This is especially true in the case of pediatric patients, those with special needs, and vulnerable populations.

When medical educators in internal medicine and pediatrics were asked to rate the appropriateness of certain online physician-on-patient interactions, those with special needs, and vulnerable populations.

Table 3. Recommendations for Physicians Who Use Social Networking

<table>
<thead>
<tr>
<th>Context</th>
<th>Recommendations for Ethical and Professional Conduct</th>
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<tr>
<td>Writing about patients</td>
<td>Avoid writing about specific patients</td>
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<td>Privacy settings</td>
<td>Opt for highest privacy settings</td>
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<tr>
<td>Social networking connections</td>
<td>Avoid extending “friend requests” to patients</td>
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<td>with patients</td>
<td>Respond to friend requests from patients to access</td>
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<td>physician’s personal social networking page</td>
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<td>by redirecting them to more secure means of</td>
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<td>communication or to a physician’s professional social</td>
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<td>networking page</td>
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<td>Identification</td>
<td>Avoid anonymity</td>
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<tr>
<td></td>
<td>Accurately state credentials</td>
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<td></td>
<td>Specifically state whether you are not representing</td>
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<tr>
<td></td>
<td>your employer or institution</td>
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<tr>
<td>Giving medical advice</td>
<td>Avoid giving specific medical advice to nonpatients</td>
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Other Legal Issues
An in-depth discussion of legal implications of social media use in clinical care is beyond the scope of this article. However,
beyond HIPAA and privacy law, there are several other legal issues that deserve mention.

**Discoverability**
Content posted on social networks, regardless of whether privacy settings are used, is discoverable and can be used to judge an individual’s character in lawsuits. The Facebook data use policy informs users that “we may access, preserve and share your information in response to a legal request” both within and outside of US jurisdiction. The policy also states that information may be shared for any number of reasons, including to aid investigations, prevent fraud or illegal activity, or to protect Facebook, the user, or anyone else. Despite this, we believe that opting for the highest privacy settings for personal social networking site pages helps to create boundaries between personal and professional content and limits any undesired contact with patients.

**Giving Medical Advice**
While using social media (or e-mail), it is possible that a non-patient asks a physician for medical advice. Terry warns that any personalized response may imply the creation of a physician-patient relationship regardless of whether a disclaimer is given. He states:

...the only legally sound approach is for the physician to respond to an electronic inquiry with a standard form response, that in no way refers to the specific sender or the sender’s disclosed information, which (1) informs the questioner that the physician does not answer such online questions, (2) supplies the questioner with the physician’s offline office information in case the questioner would like to make an appointment, and (3) provides contact information for the emergency services and suggest the questioner contacts same if he or she cannot wait for an appointment during regular business hours.

In circumstances where a patient-physician relationship already exists, informed consent, as mentioned above, with careful discussion of potential risks of this form of communication, response times, and the handling of emergencies, should take place before any clinical interactions by physicians with patients online. These interactions would also need to be documented and included as part of the patient’s medical chart.

**Social Implications**
With a greater amount of time spent interacting online, there is concern that the corresponding decrease in face-to-face interactions between physicians and patients may result in less ability to relate to others and a decline in empathy. Relationships online lack critical nonverbal cues, and communication can be easily misinterpreted. Nonverbal cues, as opposed to verbal utterances, are thought to carry the majority of meaning when communicating messages regarding feelings and attitudes. An effort to maintain authentic communication will be important as social media is used more and more in clinical medicine. This means using social media as a tool to augment in-person care and not as a replacement. Also, the use of 2-way video can provide more authentic communication than instant messages, e-mail, texting, or 1-way video.

**Future Possibilities**
The potential of social media to improve healthcare, health communication, and health information sharing cannot be underestimated. With patient networks sharing their data and experiences and physician networks facilitating discussion about therapies and studies, might social media lead to better medicine? Regional variations in medical treatment have been demonstrated, with both patients and physicians not always aware of the current best practices. Could social media drive evidence-based standards in medical care through greater transparency, expert discussion, quality improvement, and information sharing? Increased standardization of treatment, while acknowledging the need for individualization of treatment plans on the basis of patient preference and other factors, might also lead to better cost containment, because physician behavior has been shown to be a factor in variations in regional healthcare spending. Moreover, could social media decrease the gap between clinical research and actual practice, facilitating translational research and applicability to patients? The much lamented gap depends on a number of factors, including the quality, magnitude, and relevance of research, as well as the incentives to adopting practice changes. However, certainly contributing is the time it takes for research to disseminate, expert opinions to be voiced, and important discussions to take place. Social media may streamline this process and lead to faster translation of evidence to current practice.

**Conclusions**
Social media has transformed communication and is on its way to transforming healthcare. As its uses in clinical care grow, so must physician awareness of the implications this has on our ethics, professionalism, relationships, and profession. Abiding by our ethical and professional commitments to maintain the foundations of public trust in the medical profession will be absolutely necessary to successfully incorporate social media in clinical care. Those who share this vision will be poised to lead this social revolution in healthcare.
Disclosures

None.

References


KEY WORDS: internet ■ medical ethics ■ social media ■ social networking
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Katherine C. Chretien and Terry Kind

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